

What is Claimed is:

Sub  
AR

1. A method for performing a random access in a mobile communication system, comprising the steps of:

monitoring at base station a state of a reverse common channel;

5 determining state information of the reverse common channel corresponding to a result of the monitoring using one slot allocated to a forward common channel; and,

transmitting the state information to respective mobile stations through the forward common channel.

10 2. A method as claimed in claim 1, wherein the slot includes at least two channel information bits and one power or reservation control bit.

3. A method as claimed in claim 2, wherein, if at least two of the channel information bits are used the channel information bits are repeated with an odd number of times.

15 4. A method as claimed in claim 1, wherein the state information of the reverse common channel corresponding to the result of the monitoring determines one of a plurality of preset state information.

5. A method as claimed in claim 4, wherein the state information comprising;  
idle-normal state information representing a state in which the reverse common channel is in an idle state and not reserved by a particular mobile station,  
idle-reservation state information representing a state in which the reverse common

channel is in a idle state and reserved by a particular mobile station,

busy-down state information representing both a state in which the reverse common

channel is in a busy state and a command for reducing a transmission power to the mobile station,  
and

5 busy-up state information representing both a state in which the reverse common channel  
is in a busy state and a command for boosting a transmission power to the mobile station.

6. A method as claimed in claim 5, wherein the base station transmits a message for  
performing a random access in a case when every even numbered slot with reference to a first slot  
number of one frame has the idle-normal state information.

10 7. A method as claimed in claim 5, wherein the idle-reservation state information is  
transmitted in succession loaded on two slots in a case when the state information transmitted  
from the base station to the mobile station is the idle-reservation state information.

8. A method as claimed in claim 1, wherein the base station determines the power control  
command before a starting point of each slot allocated to the reverse common channel.

15 9. A method as claimed in claim 1, wherein the base station matches periods of the reverse  
slots the mobile station uses to forward slots before using the reverse slot.

10. A method as claimed in claim 1, wherein the base station feeds back the state  
information continuously using a portion of broadcasting channel.

11. A method as claimed in claim 1, after the transmitting step, further comprising the steps of:

receiving and analyzing at respective mobile station state information of the reverse common channel; and,

performing at the respective mobile station a random access according to the state information.

12. A method as claimed in claim 11, wherein the message transmission is stopped if two idle state slots are detected by the mobile station in succession as a result of monitoring the next slot after transmission of a message through an arbitrary slot for performing random access.

13. A method as claimed in claim 11, wherein the mobile station does not change the transmission power for the idle state information occurred during performing random access.

14. A method as claimed in claim 11, after the step of performing a random access, further including the step of determining a state of the reverse common channel through information contained in the next slot.

15. A method as claimed in claim 14, wherein the mobile station determines as a result of the determination that the random access is performed properly if the reverse common channel is in a busy state, and the random access is performed improperly if the reverse common channel is in an idle state.

16. A method as claimed in claim 15, wherein the mobile station automatically performs the random access again if it is determined as a result of the determination that the random access is performed improperly.

Sub  
A2  
5 17. A method for performing a random access in a mobile communication system, comprising the steps of:

monitoring at base station a state of a reverse common channel;

determining state information of the reverse common channel corresponding to a result of the monitoring using a portion of one slot allocated to a forward common channel; and,

transmitting the state information to respective mobile stations through the forward common channel.

Add A3